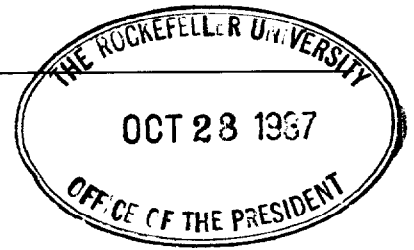


# University of Wisconsin-Madison



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Dr. Joshua Lederberg  
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Dear Joshua,

Sorry I didn't get back to you earlier regarding your Sept. 12 query. I have been swamped with a new edition of my textbook, but this is now mostly behind me and I can find time to uncover my desk.

Regarding Kircher: I enclose a few pages from Bulloch's book, which I suspect is the source that most people would cite. Certainly, Bulloch doesn't seem to consider Kircher's work significant.

Regarding rapid generation times: My impression is that the most rapid is the 10 minute generation time of Clostridium perfringens, but I can't lay my hands on a citation for it. I do recall, however, that such rapid growth occurred only for a few doublings (or at least only for a few doublings where the cell count was high enough to be measured accurately). There are, I believe, theoretical limits on growth rate determined by the rate of DNA unwinding. I discussed that very briefly in a paper I wrote many years ago (reprint enclosed), but I don't know that this has been followed up.

Did we ever discuss the article by Hadley on bacterial genetics that appeared in Jordan and Falk's 1928 textbook? I find especially interesting his comments about the inhibiting influence of the Cohn/Koch school of monomorphism on the development of bacterial genetics. Actually, when Koch began his work, it was very important to insist on monomorphism; only later did this rigidity inhibit research on bacterial genetics.

I hope these tidbits are of value to you.

Sincerely,

Thomas D. Brock  
E.B. Fred Professor  
of Natural Sciences

\* Newer Knowledge of Bact & Imm.